WHAT IS CLAIMED IS:

1. An x-ray cassette, comprising:

a shell comprising an upper and lower panel, a first and second side member, and a front end member, the first and second side members and front end member joining the upper and lower panels to define a cavity having an open end;

a storage phosphor assembly comprising a back end member, an insert plate, and an edge insert, the storage phosphor assembly adapted to be removably contained within the shell such that the back end member closes off the open end of the shell, a first side of the edge insert being affixed to the insert plate, a first end of the edge insert disposed adjacent the back end member, a second end of the edge insert comprising at least one recess on the first side.

2. The x-ray cassette of Claim 1, wherein the second end of the edge insert comprises a plurality of recesses on the first side having an interstice therebetween.

3. The x-ray cassette of Claim 2, wherein each recess has a curved shape.

4. The x-ray cassette of Claim 3, wherein each recess comprises a semi-circular shape.

5. The x-ray cassette of Claim 4, wherein each recess has a radius of about 0.5 inches spaced by about 0.080 inches.

6. The x-ray cassette of Claim 1, wherein the insert plate further comprises a second edge insert, a second side of the second edge insert being affixed to the insert plate, a first end of the second edge insert disposed

adjacent the back end member, a second end of the second edge insert comprising at least one recess on the second side.

7. The x-ray cassette of Claim 1, wherein the insert plate includes a honeycomb core comprising honeycomb cells, the honeycomb cells disposed along a perimeter of the honeycomb core being filled with a filler material.

8. The x-ray cassette of Claim 1, wherein the insert plate includes outer aluminum skins sandwiching a honeycomb core.

9 The x-ray cassette of Claim 8, wherein the edge inserts extend beyond the perimeter of the aluminum skins, thereby creating a shock absorption system to absorb and distribute forces exerted on the insert plate.

10. The x-ray cassette of Claim 8, wherein edges of the core are recessed from the edges of the outer aluminum skins to create a cavity along a first and second side of the insert plate.

11. The x-ray cassette of Claim 1, wherein the edge insert comprises at least one shallow channel disposed thereon.

12. The x-ray cassette of Claim 11, wherein the channel is disposed at an angle relative to an edge of the edge insert.

13. The x-ray cassette of Claim 1, wherein the back end member comprises at least one shallow channel disposed thereon.

14. The x-ray cassette of Claim 13, wherein the channel is disposed at an angle relative to an edge of the back end member.

15. An x-ray cassette, comprising:

a shell comprising an upper and lower panel, a first and second side member, and a front end member, the first and second side members and front end member joining the upper and lower panels to define a cavity having an open end;

a storage phosphor assembly comprising a back end member, an insert plate, and first and second edge inserts, the storage phosphor assembly adapted to be removably contained within the shell such that the back end member closes off the open end of the shell, the first and second edge inserts each being affixed to the insert plate, the first and second edge inserts each having a first end disposed adjacent the back end member, the first and second edge inserts each having a second end comprising a plurality of spaced recesses.

16. The x-ray cassette of Claim 15, wherein each recess comprises a semi-circular shape having a radius of about 0.5 inches spaced by about 0.080 inches.

17. The x-ray cassette of Claim 15, wherein the insert plate includes outer aluminum skins sandwiching a core.

18. The x-ray cassette of Claim 17, wherein the first and second edge inserts extend beyond the perimeter of the aluminum skins, thereby creating a shock absorption system to absorb and distribute forces exerted on the insert plate.

19. The x-ray cassette of Claim 17, wherein edges of the core are recessed from the edges of the outer aluminum skins to create a cavity along a first and second side of the insert plate.

20. The x-ray cassette of Claim 15, wherein the first and second edge inserts each comprise a plurality of channels disposed thereon, and the channels are disposed at an angle relative to an edge of the first and second edge inserts.

21. The x-ray cassette of Claim 15, wherein the back end member comprises a plurality of channels, and the channels are disposed at an angle relative to an edge of the back end member.

22. The x-ray cassette of Claim 15, wherein the insert plate includes a honeycomb core comprising honeycomb cells, the honeycomb cells disposed along a perimeter of the honeycomb core being filled with an adhesive or epoxy.